

CLAIMS

I/We claim:

1. A receiving unit associated with at least one local monitoring unit for use in a monitoring system, the receiving unit receives signals transmitted from at least one transmitting tag, the receiving unit comprising:
 - 5 an attenuating unit (110) for attenuating the transmitted signals by a controlled factor;
 - a receiver (120) for receiving and processing the transmitted signals into readable data;
 - 10 a microcontroller (130) for determining the distance between the at least one transmitting tags and the receiving unit; and
 - an electronic circuitry (150) for calculating the received strength signal indication.
2. The receiving unit of claim 1 further comprising an antenna (100) for receiving the transmitted signal by the at least one transmitting tag.
- 15 3. The receiving unit of claim 1 further comprising an analog to digital converter (140) for converting the transmitted signals into digital signals.
4. The receiving unit of claim 1 wherein the transmitted signals are radio frequency signals.

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5. A method for determining the distance of an at least one transmitting tags from a receiving unit, the method comprising the steps of:
 - waiting (210) for a signal to be received from an at least one transmitting tag;
 - 5 receiving (220) the received signal, the received signal passes to a microcontroller for processing;
 - measuring (230) the received signal and calculating the received strength signal indication of the received signal;
 - If the received strength signal indication is stronger than a threshold level (240) the microcontroller is updated (241) and the attenuation is increased (step 242).
6. The method of claim 5 further comprising the steps of: if the received signal strength indication is smaller than the threshold level (240), the microcontroller is queried to obtain a current attenuation factor value (243) and a distance between the receiver and the at least one transmitting tags is calculated (250).
7. The method of claim 5 wherein the receiver is a radio frequency receiver.
8. The method of claim 5 wherein the threshold level is pre calculated based on the receiver parameters.
- 20 9. The method of claim 6 wherein the calculation is performed using a lookup table.

10. The method of claim 5 wherein the at least one transmitting tag is worn by a monitored person.
11. The method of claim 5 wherein the at least one transmitting tag is worn by a monitored animal.
- 5 12. The method of claim 5 wherein the at least one transmitting tag is a securely device attached by a fixed or mobile object.

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